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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER LANDAU, SHARMILA GOLLAMUDI	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/702,438

**Applicant(s)**

DE CARVALHO ET AL.

**Examiner**

Sharmila Gollamudi Landau

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4-11 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-11, 13-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

Receipt of Remarks and Amendments filed 1/24/08 is acknowledged. Claims 1-2, 4-11, 13-25 are pending in this application. Claims 3 and 12 stand cancelled.

***Claim Rejections - 35 USC § 112***

**The rejection of claims 6-7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn in light of applicant's amendment filed 1/24/08.**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Independent claim 1 is directed a cosmetic aerosol composition for hair, packaged in an aerosol device, comprising: (a) at least one anionic fixing polymer present in an amount ranging from 0.5% to 10% by weight, based on the total weight of the aerosol composition, (b) at least one polyol with a molecular weight less than 500, present in an amount greater than or equal to 15% by weight, based on the total weight of the aerosol composition, wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom, (c) an aqueous-alcoholic or aqueous medium comprising at least 10% by weight of water, based on the total weight of the aerosol composition, and (d) at least one propellant gas in an amount greater

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than or equal to 30% by weight, based on the total weight of the aerosol composition. Claim 10, which is dependent on claim 1, recites, "wherein the at least one polyol is chosen from propylene glycol, glycerol, isoprene glycol, neopentyl glycol, hexylene glycol and polyethylene glycols". As pointed out by applicant, polyethylene glycols only have two carbon atoms that are continuous. Thus, polyethylene glycols cannot be the recited polyol of claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

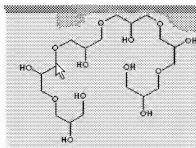
**Claims 1-2, 4-10 and 13-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolich et al (6,635,240).**

Bolich teaches an aerosol hair styling compositions which comprise (a) from about 5% to about 90% of a water-soluble polyalkylene glycol (polyol) that has a number average molecular

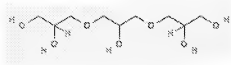
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weight of from about 190 to about 1500 and from about 5 to about 35 repeating alkylene oxide radicals wherein each of the repeating alkylene oxide radicals has from 2 to 6 carbon atoms; (b) from about 1% to about 90% of a liquid carrier; and (c) from about 5% to about 40% of a propellant. See column 3, lines 20-30. The aerosol hair styling compositions provides improved dry hair restyling performance for several days without the need to reapply the composition or add any other styling aid on the hair. See column 3, line 65 to column 4, line 16. The composition is packaged into an aerosol dispenser. See column 16, lines 13-26.

Bolich teaches the concentration of the polyalkylene glycols are generally in a range from about 1% to about 90%, preferably from about 3% to about 75%, more preferably from about 7.5% to about 50%, even more preferably from about 10% to about 25%, by weight of the composition. Specific examples of the preferred polyalkylene glycols include polyethylene/polypropylene glycol copolymers, triglycerin, hexaglycerin, PEG-4, PEG-6, PEG-5, PEG-6, PEG-8, PEG-12, PEG-14, PEG-18, PEG-20, PEG-32, and mixtures thereof. See column 6, lines 20-45 and examples. Note hexaglycerin has a molecular weight of 462.49 and it has three carbons that are continuous and not interrupted by a heteroatom. Thus, hexaglycerin reads on claimed recitation "wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom."



Note triglycerol (molecular weight 240.25) also reads on claimed recitation "wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom."



Bolich teaches additional styling agents to help improve initial hair hold performance in an amount of about 0.25% to about 5%, preferably from about 0.5% to about 4.0%, by weight of the compositions. See column 6, lines 45-55. Bolich teaches the use of polysaccharide styling polymers selected from anionic polysaccharides, cationic polysaccharides, and nonionic polysaccharides. See column 7, lines 1-5 and example XIX-XX.

Bolich also discloses the hair styling compositions further comprises a gelling agent to help provide the desired viscosity and it also helps to provide for improved hair hold in an amount from about 0.1% to about 10%, preferably from about 0.2% to about 5.0%, by weight of the compositions. Bolich teaches the preferred crosslinked carboxylic acid polymers are those crosslinked carboxylic acid homopolymers or copolymers, which contain unneutralized acid monomers (anionic polymer). Bolich teaches the preference for crosslinked carboxylic acid polymers which have unneutralized acid monomers is due to the fact that they are effective in providing gelling properties to the residue without suppressing the ease of removability of the residue by shampooing the hair. See column 12, line 64 to column 13, line 5 and examples XV-XVI, which utilize Carbopol 934, which is an anionic polymer.

Bolich teaches the liquid carrier can comprise one or more liquid carriers provided that the selected styling agent is sufficiently miscible or dispersible in the selected liquid carrier.

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Preferred C1 -C6 alkanols include monohydric alcohols such as ethanol, isopropanol, and mixtures thereof. When the hair styling compositions comprise combinations of water and an organic solvent such as C1-C6 alkanols, water is preferably included at concentrations of from about 40% to about 90%, more preferably from about 50% to about 90%, even more preferably from about 60% to about 90%; and the alkanols are preferably included at total concentrations of from about 1% to about 15%, more preferably from about 3% to about 15%, even more preferably from about 5% to about 10%, by weight of the composition. See column 8, lines 15-60 and examples.

Bolich teaches the total concentration of the propellant in the aerosol hair styling composition include one or more propellants and the total propellant concentration ranging from about 5% to about 40%, preferably from about 5% to about 25%, more preferably from about 5% to about 15%, by weight of the composition. Suitable propellants taught include hydrocarbons, nitrogen, carbon dioxide, nitrous oxide, atmospheric gas, 1,2-difluoroethane, dimethylether, and mixtures thereof. Suitable hydrocarbon propellants include propane, butane, and isobutane. See column 11, lines 15-25 and examples.

Bolich teaches optional materials including preservatives, surfactants, conditioning polymers, electrolytes, fatty alcohols, hair dyes, antidandruff actives, odor masking agents, pH adjusting agents, perfume oils, perfume solubilizing agents, sequestering agents, emollients, lubricants and penetrants such as various lanolin compounds, protein hydrolysates and other protein derivatives, sunscreens, volatile silicone fluids, and isoparaffins. See column 15, lines 50-65 and examples.

Example XV discloses a composition comprising 15% PEG-8 (carbowax 400 with a molecular weight of 400), 0.30% Carbopol (reads on anionic hair fixing polymer as taught by Bolich on column 6, lines 45-54), 10% propellant, and water, among other components. The composition is packaged in an aerosol container.

Bolich does not exemplify the instant concentrations of the propellant and Carbopol. Further, Bolich does exemplify hexaglycerin or triglycerin.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to look at the guidance provided by Bolich et al and manipulate the concentrations of the propellant and carbopol in the composition. One would have been motivated to do so with a reasonable expectation of success and similar results since Bolich et al teach the propellant in an amount of 5-40% as taught by Bolich on column 11, lines 20-25 and as claimed in claim 29 of the patent. Further, Bolich et al teach the gelling agent which “helps to provide for improved hair hold performance” in an amount of 0.1-10% on column 11, lines 55-67. Secondly, it would have been obvious to substitute the exemplified polyalkylene glycols (PEG) with the hexaglycerin or triglycerin in the claimed amount since Bolich suggests the use of hexaglycerin or triglycerin as the polyalkylene glycols, which are used in an amount of about 1% to about 90%, preferably from about 3% to about 75%, more preferably from about 7.5% to about 50%, even more preferably from about 10% to about 25%, by weight of the composition. Therefore, it is within the skill of an artisan to look at the guidance provided by Bolich and not only manipulate the concentrations within the general range provided by the prior art but to also utilize the suggested components since Bolich provides the reason and motivation to do so.



Lastly, it is further pointed out that additional styling polymer are taught including anionic polysaccharides in an amount of 0.25-5%. Therefore, it is within the skill of an artisan to further add an anionic polymer to the composition.

Note claim 10 is rejected in view of the 112, 2<sup>nd</sup> rejection and until applicant amends the claim.

### ***Response to Arguments***

Applicant argues that the Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Applicant argues that rationales that may support a conclusion of obviousness include, inter alia, "simple substitution of one known element for another to obtain predictable results" and "some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." Applicant argues that in the present case, Bolich does not provide any such motivation to manipulate the concentrations to arrive at the presently claimed composition.

Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. As acknowledged by applicant, the prior art must provide rationale to support a legal conclusion of obviousness. In instant case, the examiner has specified the portions in which Bolich provides ample suggestion and motivation to do so.

First, the examiner points out that "disclosed examples and preferred embodiments do not constitute a teaching away from the broader disclosure or nonpreferred embodiment". In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). In instant case, the fact that Bolich does not

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exemplify the instant concentration does not equate a lack of obviousness. Although Bolich does not exemplify the instant amount of propellant (an amount greater than or equal to 30%) in examples I-XXI (all of which are aerosol mousse compositions), Bolich clearly suggests such an amount on column 11, lines 19-27:

The aerosol hair styling compositions of the present invention comprise a propellant suitable for aerosol delivery of the composition to the desired application surface. The total concentration of the propellant in the aerosol hair styling composition can include one or more propellants, **the total propellant concentration typically ranging from about 5% to about 40%**, preferably from about 5% to about 25%, more preferably from about 5% to about 15%, by weight of the composition.

Further, claim 1 of the Bolich patent claims: an aerosol hair styling composition comprising: (a) from about 5% to about 90% by weight of a water-soluble polyalkylene glycol that is substantially free of polyalkylene glyceryl ethers and that has a number average molecular weight of from about 190 to about 1500 and from about 12 to about 35 repeating alkylene oxide radicals wherein each of the repeating alkylene oxide radicals has from 2 to 6 carbon atoms; (b) from about 1% to about 90% by weight of a liquid carrier; and (c) **from about 5% to about 40% by weight of a propellant.**

Thus, not only does Bolich **suggests** the instant amount but also **claims** the instant amount.

The examiner directs applicant's attention to MPEP 2144.05: In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists... Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties.

Further, MPEP 2144.05 III states: Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. However, applicant has not showed any unexpected results with objective evidence.

Similarly, the fact that Bolich does not exemplify the instant amount of Carbopol does not equate a lack of obviousness. The instant claims are directed to 0.5-10% of an anionic fixing polymer. For instance, example XV contains 0.30% Carbopol (an anionic polymer) and 0.10% Permulen (an anionic polymer) to provide an amount of 0.40%. Bolich discloses on column 6, lines 45-67:

The preferred optional gelling agent also helps to provide for improved hair hold performance. Suitable optional gelling agents include any material known or otherwise effective in providing any gelling or measurable viscosity increase to the residue. The concentrations of the optional gelling agent in the compositions range from **about 0.1% to about 10%, preferably from about 0.2% to about 5.0%**, by weight of the compositions.

Therefore, although Carbopol and Permulen are referred to as "gelling agents", Bolich teaches the dual function of these gelling agents to not only increase viscosity but also to provide a hair holding function. Thus, Bolich suggests the instant range.

Moreover, the fact that a cationic fixing polymer is exemplified does not equate a lack of obviousness in the use of an anionic fixing polymer; i.e. substituting the cationic polymer with an anionic polymer. Bolich discloses on column 6, line 45 to column 7, line 1:

In addition to the styling agent, the hereinbefore described hair styling compositions of the present invention may further comprise one or more optional styling polymers which can help provide improved initial hair hold performance. The total concentration of such optional styling polymers ranges from about **0.25% to about 5%, preferably from about 0.5% to about 4.0%**, by weight of the compositions. Column 5, lines 45-54.

Optional styling polymers for use in combination with the styling agent defined herein include any known or otherwise effective styling polymer, provided that the optional styling polymer is soluble in the liquid carrier described herein which contains the optional styling polymer and styling agent, and provided that under test conditions of 27.degree. C. and 15% relative humidity the optional styling polymer is insoluble in the residue described herein and can form a solid film that is surrounded by the styling agent material after evaporation of the liquid carrier and any other volatile materials contained in the aerosol hair styling

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compositions of the present invention. Such optional styling polymers include, but are not limited to, polysaccharide styling polymers. Specific nonlimiting examples of suitable polysaccharide styling polymers include **anionic polysaccharides**, cationic polysaccharides, and glucosamine polysaccharide derivatives. The glucosamine polysaccharide derivatives are the preferred optional styling polymers. Column 6, lines 55-67 to column 7, lines 1-4.

Bolich also claims the incorporation of an anionic polymer. Claim 12 of the Bolich patent claims: wherein the polysaccharide styling polymer is selected from the group consisting of glucosamine polysaccharide derivatives, cationic polysaccharides, **anionic polysaccharides**, and mixtures thereof.

Applicant argues that Bolich teaches a hair mousse and not an aerosol hair spray.

It is noted that the features upon which applicant relies (i.e., hair spray) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner points out that a mousse is in an aerosol form and the instant claims are only directed to an “aerosol composition”. However, Bolich is also suggestive of a hair spray on column 1, line 20 and column 16, lines 35-40.

Applicant argues that even if an aerosol “was contemplated, a person skilled in the art would recognize that gelling agents, such as Carbopol, would increase the viscosity and surface tension of the composition, characteristics that could be problematic if the composition were to be delivered in aerosol form.”

Again, the examiner points out that the mousse formulation taught in examples I-XXI are aerosol formulations and the formulations comprise the gelling agents. Thus, applicant’s arguments are unsupported and mere conjectures.

Lastly, as acknowledged by applicant, MPEP 2143 states: Exemplary rationales that may support a conclusion of obviousness include, inter alia, **"simple substitution of one known element for another to obtain predictable results"** and "some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." In instant case, Bolich clearly provides a motivation to substitute the exemplified water-soluble polyalkylene glycol for another such as hexaglycerin or triglycerin with the expectation of a predictable result. Also, Bolich provides a motivation and suggestion to substitute the exemplified cationic polymer with an anionic polymer.

Therefore, Bolich is considered to render the instant invention obvious.

**Claims 1-2, 4-11, 13-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birkel et al (2001/0003584).**

Birkel teaches a hair composition comprising (a) a terpolymer present in the composition in an amount of 0.01 to 20% and (b) an anionic polymer present in an amount of from 0.01 to 20%, especially preferably of 0.05 to 10%, and most preferably from 0.1 to 5%. See [0008]. The polymer (B) can be a homopolymer or copolymer with monomer units containing acid groups on a natural or synthetic basis. Suitable monomers containing acid groups include, for example, acrylic acid, methacrylic acid, crotonic acid, maleic acid and/or maleic acid anhydride, maleic acid monoester, especially the mono-C1- to C7-alkyl ester of the maleic acid and aldehydicarboxylic acids or ketocarboxylic acids. Suitable polymer compounds with acid groups include cross-linked or uncross-linked vinyl acetate/crotonic acid copolymers; vinyl acetate/crotonic acid/vinyl alkanoate copolymers; VA/crotonates/vinyl neodecanoate copolymer;

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copolymers of one or more C1- to C5-alkylacrylates, especially C2- C4-alkylacrylates and acrylic acid or methacrylic acid; etc. See [0017]; [0020]; and examples.

Birkel teaches the composition is packaged in an aqueous, alcoholic or an aqueous-alcoholic medium preferably with at least 10 percent by weight water. Lower alcohols with 1 to 4 carbon atoms, such as ethanol and isopropanol, can be contained. See [0026] and examples. Examples utilize 10% water and above.

Organic solvents or a mixture of such solvents can be contained in the composition. Ethylene glycol (polyol), glycerol (polyol), and propylene glycol (polyol) in amount of up to 30 percent by weight are especially preferred water-soluble solvents. See [0027].

The composition is employed in various application forms including a lotion, as a non-aerosol spray solution, which is sprayed by means of a mechanical apparatus for spraying, as an aerosol spray which is sprayed by means of a propellant, as an aerosol-foam or as a non-aerosol foam, as a hair cream, and as a hair wax. See [0029]. Specifically, Birkel discloses if the hair treatment composition is in the form of an aerosol spray, it contains 15 to 85%, preferably 25 to 75% by weight of a propellant and is filled into a pressurized container. Example of propellants disclosed include lower alkanes, including n-butane, i-butane and propanes, dimethyl ether (DME) or fluorinated hydrocarbons be used as the propellant. See [0030] and examples. Example 4 discloses a composition packaged in an aerosol can, in a ratio 45:55 (composition:DME).

Birkel teaches cosmetic additive for the composition include wetting agents or emulsifiers from the classes of nonionic, anionic, cationic or amphoteric surface-active substances, such as fatty alcohol sulfates, alkylbenzene sulfonates, alkyltrimethyl ammonium

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salts, alkyl betaines, in an amount of from 0.1 to 15%; moisturizing agents; perfumes, in an amount of from 0.1 to 0.5%; turbidity-inducing agents, such as ethylene glycol distearates, in an amount of about 0.2 to 5.0%; buffer substances, such as sodium citrate or sodium phosphate, in an amount of 0.1 to 1.0%; care materials, such as plant and vegetable extracts, protein and silk hydrolyzates, lanolin derivative compounds, in an amount of from 0.1 to 5%; silicone derivative compounds, including volatile or non-volatile silicone oils or high molecular weight siloxane polymers, in an amount of from 0.05 to 20%. See [0028] and examples.

Birkel teaches the composition discloses the method for improving film-forming and hair-fixing properties wherein the composition is applied to the hair to fix the style. See [0006] and examples on page 4. Examples 2-6 are directed the aerosol compositions. Example 5-7 teach an aerosol composition comprising a propellant, the anionic polymer, water and ethanol which make up the aqueous-alcohol medium, and other components. Example 3 teaches a hair spray comprising dimethyl ether as the propellant, the anionic polymer, water and ethanol which make up the aqueous-alcohol medium, and other components.

Birkel does not provide an example comprising instant glycols as the co-solvents in the examples.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the instant polyols in the instant concentration in the examples. One would have been motivated to so with a reasonable expectation of success and similar results since Birkel teaches the use of organic co-solvents such as ethylene glycol, glycerol, and propylene glycol in an amount of up to 30% with the aqueous or alcohol-aqueous medium.

Therefore, it would have been prima facie obvious to add a co-solvent to the aqueous or alcoholic-aqueous medium to further solubilize other additives in the composition.

***Response to Arguments***

Applicant argues that obviousness rejections "cannot be sustained with mere conclusory statements." Applicant argues that the mere mention of polyols as cosolvents does not provide any reason to add the polyol.

Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. The examiner disagrees with applicant. The fact that Birkel states in paragraph 0027,

Organic solvents or a mixture of such solvent with a boiling point under 400.degree.C. can be contained in the composition according to the invention in an amount of from 0.1 to 15 percent by weight, especially preferably of from 1 to 10 percent by weight, as additional co-solvents. Branched or unbranched hydrocarbons, such as pentane, hexane, isopentane and cyclic hydrocarbons, such as cyclopentane and cyclohexane, are especially suitable as co-solvents. Ethylene glycol, glycerol, and propylene glycol in amount of up to 30 percent by weight are especially preferred water-soluble solvents

Thus, the very fact that Bolich states the function of the glycols in the composition and states that they are preferred co-solvents, provides ample motivation for a skilled artisan to incorporate a glycol in the aqueous-alcohol medium. Applicant has not provided any evidence of unexpectedness to overcome the prima facie case of obviousness.

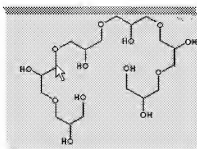
**Claims 1-2, 4-11, 13-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carballada et al (6,585,965).**

Carballada et al teach a hair care composition comprising 5-20% polyalkylene glycol styling agents having a molecular weight of 200 to 900 and a film-forming polymer. See abstract and column 2, lines 35-60. The polyalkylene glycol comprises a polyethylene glycol or a polypropylene glycol, PPG-4 (about 304.36 molecular weight), hexaglycerin, triglycerin, PPG-

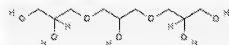


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6, PEG-5, PEG-6, PEG-8, PEG-12, PEG-14, and PEG-18. Note hexaglycerin has a molecular weight of 462.49 and it has three carbons that are continuous and not interrupted by a heteroatom. Thus, hexaglycerin reads on claimed recitation “wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom.”



Note triglycerol (molecular weight 240.25) also reads on claimed the recitation “wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom.”



Note polypropylene glycol and PPG-4 reads on claimed the recitation “wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom.”



The film-forming agent is utilized in an amount of 0.1-3%. See column 6, lines 40-45. The liquid carrier includes water, organic solvents such as ethanol, n-propanol, isopropanol, n-butanol, and combinations thereof. The liquid carrier comprises at least 50% water. see column

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7, lines 1-15. Example IV teaches a composition comprising 38.90% water, 15% ethanol, 1% polyurethane-1 (anionic polymer), 12% PEG-8 ((PEG-8 is also known as Carbowax 400 and has a MW of 400), 0.1% perfume, silicone emulsion, 30% dimethyl ether, among other components. The composition is in an aerosol container.

Carballada does not exemplify the PPG-4, hexaglycerin, or triglycerin in the composition.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to look at the guidance provided by Carballada and substitute the exemplified polyalkylene glycols (PEG) with polypropylene glycol, PPG-4, hexaglycerin or triglycerin in the claimed amount since Bolich suggests the use of glycol, PPG-4, hexaglycerin, or triglycerin as the polyalkylene glycols, which are used in an amount of about 5-20%, wherein the concentration used depends on the desired styling properties.

#### ***Response to Arguments***

Applicant argues that Carballada does not teach the instant polyols as amended.

Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. It is noted that Carballada teaches polypropylene glycol, PPG-4, hexaglycerin or triglycerin, which reads on the instant recitation wherein the polyol comprises a C3-C30 hydrocarbon chain which is not interrupted by a heteroatom."

#### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

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*Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**The provisional rejection of claims 1-2, 4-11, 13-25 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 23-50 of copending Application No. 10/279036 in view of US 5639448 is maintained.**

The instant application is directed to an aerosol composition packaged in an aerosol device, comprising: a) at least one anionic fixing polymer present in an amount ranging from 0.5% to 10% by weight, based on the total weight of the aerosol composition, b) at least one polyol with a molecular weight less than 500, present in an amount greater than 15% by weight, based on the total weight of the aerosol composition, c) an aqueous-alcoholic or aqueous medium comprising at least 10% by weight of water, based on the total weight of the aerosol composition, and d) at least one propellant gas in an amount greater than or equal to 30% by weight, based on the total weight of the aerosol composition. Instant application is also directed to the method of styling hair.

Independent claim 23 of '036 is directed to a composition packaged in an aerosol device comprising, in a cosmetically acceptable medium, at least one nonassociative fixing polyurethane and at least on anionic or nonionic associative polyurethane, and a propellant. Dependent claim 35 is directed to the anionic or nonionic polymer in the amount of 0.5-10%.

Dependent claim 40 is directed to dimethyl ether as the propellant and claim 41 is directed to the propellant in the amount of 2-90%. Dependent claim 43 is directed to the medium comprising water and a solvent. Dependent claim 44 is directed to a solvent selected from at least lower alcohols (C1-C4), alkylene polyol, a polyol ether, and mixtures. Dependent claim 46 is directed to the instantly claimed additives and dependent claims are directed to a cosmetic hair treatment.

Copending application does not claim the amount of the polyol solvent in the composition.

US '448 teaches a method of thermo-styling hair. US '448 teaches the cosmetic vehicle is predominately water with a mixture of organic solvents. Suitable solvents known in the art include alcohols, polyols such as glycerol; glycols including propylene glycol in an amount of 1-75%. See column 14, lines 5-10. US '448 teaches a the propellant is used in an amount of 3-30%. See column 13, line 50. US '448 teaches water more than 10%.

The difference between the instant application and copending application is that the instant application requires at least 15% polyols. However, copending application recites polyols and polyol ethers as the organic solvent in a Markush group. Secondly, the copending application does not claim the concentration of polyol solvent. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to look to US '448 and utilize polyols in the instant concentration. One would have been motivated to do so since US '448 teaches the instant polyols are *conventionally* utilized as solvents and carriers in the amount of 1-75% and preferably 5-50% with water. Further, it should be noted that the manipulation of concentrations of conventional solvents encompassed by the prior art are considered to be *prima facie* obvious unless there is evidence indicating the amount is critical. See *In re Aller*, 220 F.2d

454, 456, 105 USPQ 233, 235 (CCPA 1955). Therefore, the instant application and copending application are obvious modifications of each other.

This is a provisional obviousness-type double patenting rejection.

### ***Response to Arguments***

Applicant argues that application '036 does not claim at least 15% polyol. Applicant argues that although US '448 teaches the use of polyols, they are not conventionally utilized. The polyols are merely taught as possible additives to solublize compounds in an amount of 1-75%. Thus, applicant argues there is not motivation to combine '448 and '036. Applicant argues the merits of *In re Aller* are not applicable since *Aller* is directed to a process and the instant claims are compositions.

Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. US '448 teaches on column 6, lines 25-35 that the medium is water, water/ethanol, water/isopropanol or water/water-soluble-glycol carrier mixtures. As acknowledged by applicant, US '448 teaches the use of the instant polyols in an amount of 1-75% and preferably 5-50% to solublize compounds that are not sufficiently soluble. Thus, the motivation to add the instant polyols is to solublize other compounds in the hair composition. The examiner has provided a clear motivation to combine the references, which applicant has not addressed. With regard to the instantly claimed amount, US '448 teaches 1-75% and 5-50%. Thus, the instant "more than 15% is rendered obvious by US '448 range. With regard to *Aller*, the examiner points out that this case law is not only applicable to process claims as argued by applicant. Although the facts specific to *Aller* pertained to a process, this does not preclude the application of *Aller* in other situations. *In re Aller* pertained to the criticality of the *concentrations* and temperatures claimed.

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Thus, the conclusions drawn from *Aller* clearly is applicable in the instant situation since US ‘448 teaches a range of 1-75% and applicant has not provided any unexpectedness of the instant range of “more than 15%”. Therefore, regardless of the fact that *Aller* pertained to a process whereas the instant claims are directed to a composition, the conclusion drawn from *Aller* are still applicable in the instant case.

Therefore, the rejection is maintained.

**The provisional rejection of claims 1-2, 4-11, 13-25 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 20-36 of copending Application No. 10/479170 in view of US 5639448 is maintained.**

The instant application is directed to an aerosol composition packaged in an aerosol device, comprising: a) at least one anionic fixing polymer present in an amount ranging from 0.5% to 10% by weight, based on the total weight of the aerosol composition, b) at least one polyol with a molecular weight less than 500, present in an amount greater than 15% by weight, based on the total weight of the aerosol composition, c) an aqueous-alcoholic or aqueous medium comprising at least 10% by weight of water, based on the total weight of the aerosol composition, and d) at least one propellant gas in an amount greater than or equal to 30% by weight, based on the total weight of the aerosol composition.

‘170 is directed to a cosmetic composition packaged in an aerosol device comprising a propellant, a liquid phase comprising a cosmetic medium, solid particles, a fixing polymer and/or a thickening polymer and aluminum. Dependent claim 26 is directed to an anionic or nonionic polymer. Dependent claim 27 is directed to an anionic polymer wherein the monomers are sulfonic acids. Dependent claim 29 is directed to a thickening polymer that is a copolymer of

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acrylic acid and methacrylic acid (anionic polymer). Dependent claim 32 is directed to the polymer in the amount of 0.01-8%. Dependent claim 33 is directed to DME. And claim 35 is directed to the propellant in the amount of 2-90%. Dependent claim 36 is directed to the same additives as recited in instant claims. Dependent claims are directed to a method of styling the hair.

Copending application does not claim a polyol solvent in the composition.

US '448 teaches a method of thermo-styling hair. US '448 teaches the cosmetic vehicle is predominately water with a mixture of organic solvents. Suitable solvents known in the art include alcohols such as ethanol and isopropanol, polyols such as glycerol; glycols including propylene glycol in an amount of 1-75% and 5-50%. See column 14, lines 5-10. US '448 teaches a the ethanol in the amount of 0-8% and water more than 10%.

The difference between the instant application and copending application is that the instant application requires at least 15% polyols and at least 10% water. However, it would have been obvious for one of ordinary skill in the art at the time the invention was made to look to US '448. US '448 teaches the instant polyols are conventionally utilized as solvents in the amount of 1-75% and 5-50% and are in combination with water as the predominate solvent to form the liquid carrier in hair compositions. Therefore, it would have been obvious to utilize a polyol in the instant amount with water to form the liquid phase of '170 since the prior art teaches these are conventional carriers. Further, it should be noted that the manipulation of concentrations of additives such as solvents encompassed by the prior art are considered to be prima facie obvious unless there is evidence indicating the amount is critical. See *In re Aller*, 220 F.2d 454, 456, 105

USPQ 233, 235 (CCPA 1955). Therefore, the instant application and copending application are obvious modifications of each other.

***Response to Arguments***

Applicant states that claims 1-19 have been cancelled. Applicant argues that application '170 does not claim at least 15% polyol. Applicant argues that although US '448 teaches the use of polyols, they are not conventionally utilized. The polyols are merely taught as possible additives to solublize compounds in an amount of 1-75%. Thus, applicant argues there is not motivation to combine '448 and '170. Applicant argues the merits of *In re Aller* are not applicable since *Aller* is directed to a process and the instant claims are compositions.

Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. US '448 teaches on column 6, lines 25-35 that the medium is water, water/ethanol, water/isopropanol or water/water-soluble-glycol carrier mixtures. As acknowledged by applicant, US '448 teaches the use of the instant polyols in an amount of 1-75% and preferably 5-50% to solublize compounds that are not sufficiently soluble. Thus, the motivation to add the instant polyols is to solublize other compounds in the hair composition. The examiner has provided a clear motivation to combine the references, which applicant has not addressed. With regard to the instantly claimed amount, US '448 teaches 1-75% and 5-50%. Thus, the instant "more than 15% is rendered obvious by US '448 range. With regard to *Aller*, the examiner points out that this case law is not only applicable to process claims as argued by applicant. Although the facts specific to *Aller* pertained to a process, this does not preclude the application of *Aller* in other situations. *In re Aller* pertained to the criticality of the *concentrations* and temperatures claimed. Thus, the conclusions drawn from *Aller* clearly is applicable in the instant situation since US



'448 teaches a range of 1-75% and applicant has not provided any unexpectedness of the instant range of "more than 15%". Therefore, regardless of the fact that *Aller* pertained to a process whereas the instant claims are directed to a composition, the conclusion drawn from *Aller* are still applicable in the instant case.

Therefore, the rejection is maintained.

***Conclusion***

All the claims are rejected at this time.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila Gollamudi Landau whose telephone number is 571-272-0614. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sharmila Gollamudi Landau/  
Primary Examiner, Art Unit 1611